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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/668,219	09/22/2000	Yunzhou Li	2204/A42	9843
34845	7590	02/23/2005	EXAMINER	
STEUBING AND MCGUINNESS & MANARAS LLP			LY, ANH VU H	
125 NAGOG PARK			ART UNIT	PAPER NUMBER
ACTON, MA 01720			2667	

DATE MAILED: 02/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/668,219	Applicant(s) LI, YUNZHOU	
	Examiner Anh-Vu H Ly	Art Unit 2667	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-57 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-57 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 16, 2004 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Andersson et al (US Pub No. 2002/0004843 A1) in view of Walia et al (US Patent No. 6,678,274 B1).

Hereinafter, referred to as Andersson and Walia.

With respect to claims 1, 6, 13, 19, 24, 30, 37, 45, and 51, Andersson discloses in Fig. 1, a communications system in which node A has plurality of interfaces Ib and Id for connecting to nodes B and D (a networking device having a plurality of communication interfaces). Andersson discloses in Fig. 2, a forwarding table having a primary path and a corresponding recovery path; wherein, the communication network pre-computes (bridged routing entry is created before requiring a bridge) recovery paths to protect various primary paths. Andersson discloses in page 3, paragraph 48 that, upon detecting a network failure, the network nodes switch certain

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communications to one or more recovery paths in order to bypass the network failure. This implies that the network node should or should not switch to the backup interface as a function of the network changes in the communication system (subsequently determining that a bridge is needed between the first communication interface and the second communication interface).

Andersson discloses in Figs. 3A-C, different techniques employed by the network nodes for switching to the backup interface when the primary interface fails (establishing the bridge between the first communication interface and the second communication interface using the bridged routing entry).

As shown in Fig. 2, Andersson discloses only a routing table for storing the primary path and the recovery path. Andersson does not disclose having separate routing tables such as a bridged routing table and a main routing table. Wherein, the main routing table for routing network traffic and the bridged routing table for bridging network traffic. Walia discloses in Fig. 2, a forwarding table management system that includes a lookup engine, a first forwarding table memory, and a second forwarding table memory, and a forwarding table pointer. Herein, the forwarding table pointer identifies either the first forwarding table memory or the second forwarding memory as the active memory. Herein, the first forwarding memory and the second forwarding memory are considered as the main routing table and the bridged routing table by the examiner. Further, the first forwarding memory contains active entries for routing and the second forwarding memory contains protective entries for routing in case of failures or changes occur. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include separate routing tables in Andersson's system, as suggested

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by Walia, therefore, updates can be performed on the main entries while using the protective entries for routing.

With respect to claims 2, 7-8, 14-15, 20, 25, 31-32, 38-39, 46-47, and 52-53, Andersson discloses in Fig. 2, destination C is designed with two outgoing interfaces B and D (adding second communication interface as an outgoing interface to a routing entry having first communication interface as an outgoing interface). Herein, destination C is considered as one entry by the examiner even though destination C taking two rows in the table.

With respect to claims 3, 9, 16, 21, 26, 33, 40, 48, and 54, the limitation “creating a bridged routing vector for bridging the first communication interface and the second communication interface” is inherent to Andersson. As shown in Fig. 2, an entry of forwarding table comprising a primary interface and the backup interface. Further, Andersson discloses in Figs. 3A-C, different techniques employed by the network nodes for switching to the backup interface when the primary interface fails. For the switching fabrics of the network nodes to implement the switching of data from primary interface to backup interface, the forwarding table is transformed into forwarding vector and implemented by the switching fabric.

With respect to claims 10, 17, 34, 41, 49, and 55, Andersson discloses in Fig. 2 that, destination C is indicated twice (reference to destination C of the primary interface) in both rows of the forwarding table.

With respect to claims 4, 11, 22, 27, 35, and 42, Andersson discloses in page 3, paragraph 48 that, upon detecting a network failure, the network nodes switch certain communications to one or more recovery paths in order to bypass the network failure (detecting a failure affecting communications over the first communication interface).

With respect to claims 5, 12, 18, 23, 36, and 50, Andersson discloses in Fig. 1, a communications system in which node A has plurality of interfaces Ib and Id for connecting to nodes B and D (plurality of communication interfaces comprising a plurality of line cards).

With respect to claims 28-29, 43-44, and 56-57, Andersson discloses a system, device, and method for bypassing network changes in a routed communication network, therefore, such method is stored in the memory of the network nodes (program embodied in a computer medium) and such instruction is carried by a signal within the network nodes (program embodied in a data signal).

Conclusion


3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anh-Vu H Ly whose telephone number is 571-272-3175. The examiner can normally be reached on Monday-Friday 7:00am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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CHI PHAM
ADVISORY PATENT EXAMINER
BIOLOGY CENTER 2600 2/17/05